a gap between the shroud and the disc;

CA 9/15/05

Figs. 4A to 4D are contour maps of air pressure differential on the front and rear surfaces of a disc, which is obtained through analysis; and

Fig. 5 is a relationship between an amplitude of flutter and a gap between a shroud and a disc.

DESCRIPTION OF THE EMBODIMENTS

Explanation will be made of a first embodiment of the present invention with reference to Figs. 1A to 4D. Referring to Figs. 1A and 1B, discs 1 are stacked on a spindle 2, and a magnetic head 3 for recording and reproducing data is carried on a slider 4 which is supported by a magnetic head support mechanism 5 connected to a guide arm 6. A carriage 9 is composed of the guide arm 6, a pivot bearing 7 and a voice coil motor (which will be hereinbelow referred to as "VMC") 8, and the guide arm 6 is rotated by the VNC 8 around the pivot bearing 7. Further, these elements are set on a casting base 10 which is surrounded by a wall (shroud 20). A gap between the outer peripheries of the discs 1 and the inner wall of the shroud 20 is maintained at a predetermined distance (which will be referred to as "disc-shroud gap"). The shroud 20 and the base 10 are made of the same casting material, being integrally incorporated with each other.

The shroud 20 is formed therein with an opening 30 for introducing the guide arm 6 therethrough onto a surface of a disc 1. The opening angle of the opening 30 is selected so as to be minimized while to allow the arm to be simply assembled and to prevent the arm from making contact with the shroud even through the head is shifted from the inner periphery to the outer periphery of the disc. In this embodiment, the opening angle is set to about 45 deg.

A wall is formed along the entire periphery of the base 10 of the unit. Further, this wall serves as a part of the shroud 20 surrounding the outer peripheries of the discs 1. However, the shroud 20 is arranged to branch off from